resulting from this special force. If the law of *interference* explains many of the phenomena of infectious and contagious diseases, and also the action of many drugs (as for instance that of opium inhibiting or modifying nerve-vibration), no less does that of *transference* explain the origin of the germ. If a cord be stretched between two pillars, and a weight suspended half-way between, and then two other weights similarly suspended half-way between it and the pillars, so that motions at right angles may be given to them—*e. g.* north to south to one, east to west to the other—the central weight will gradually begin to swing and evolve certain figures and curves due to the impulses transferred from the two outer weights. So the union of the contents of the germ-cell and sperm-cell results in the formation of a germ which evolves a form like that of its parents, following their evolution, transmitting in turn its form to its successors, or transmuting it into other forms of motion. Thus all the phenomena of life may be explained on the vibratory hypothesis. Nay, death itself is but the transmutation into other forms of the form so evolved, and becomes as necessary a part of tne whole series of evolutions as birth.

The permanence of cicatrices is thus explained. Also the apparent intelligence with which, from a common plasma, different plants evolve different principles (according to their special vibrations), or different organs take their special nutriment from one common blood, and, as the nerves for instance, give rise to special vibrations consonant with their special functions.

In fact we enter thus upon an entirely new field in biology, physiology, pathology and therapeutics. Already the results obtained in the study of variola, syphilis, anthrax, rabies, cholera, and as alleged lately in tuberculosis, may be seen to arrange themselves in accordance with the principles thus enunciated, as foreshadowed by Dr. McLaughlin, and by Dr. Dixon in his communication to this Academy.

In reply to a question with regard to suspended animation, convulsions, etc., Dr. Morris said that he thought these phenomena were fully in accordance with the vibratory hypothesis and that the latter also offered the only plausible explanation suggested as yet of the well-known periodicity of life phenomena both in health and disease.

JANUARY 27.

Dr. GEO. H. HORN in the chair.

Thirty-two persons present.

The death on the 22nd inst. of Charles Lennig, a member, was announced.

Rate of Coral Growth.—PROF. HEILPRIN exhibited a specimen of *Porites astræoides* from the Caletta Reef, harbor of Vera Cruz, Mexico, which gave some interesting data regarding the rate of growth of coral structures. The specimen in question was received through Captain J. Powell, Chief of Construction of Piers of the Mexican Railway, and is said by that gentleman to have been removed from an anchor which was cast in the autumn of 1885 and drawn in November, 1890. The extreme period of growth is thus somewhat over five years, but naturally it is impossible to state how soon after the casting of the anchor attachment of the polyp was made. The coral is a mammillated sheet or crust measuring four inches in longest diameter, and somewhat less than three inches on the shorter diameter. The general thickness of the basal mass is not over $\frac{1}{3}$–$\frac{1}{4}$ inch, although through involution and secondary crustage knobs of considerable prominence have been added to the surface. Assuming the basal growth as the index of actual development then the annual accretion would be (if we allow full five years for the process) scarcely the $\frac{1}{20}$ of an inch. Observations recently made on other species of corals have yielded somewhat similar results.

The following were elected members:—Albert P. Brown, M. D., Amos Peaslee Brown, Thomas Hewson Bradford, M. D., Stewardson Brown, Edmund E. Reed Jr., George C. Evans and Mary S. Holmes.

The following were ordered to be printed:—